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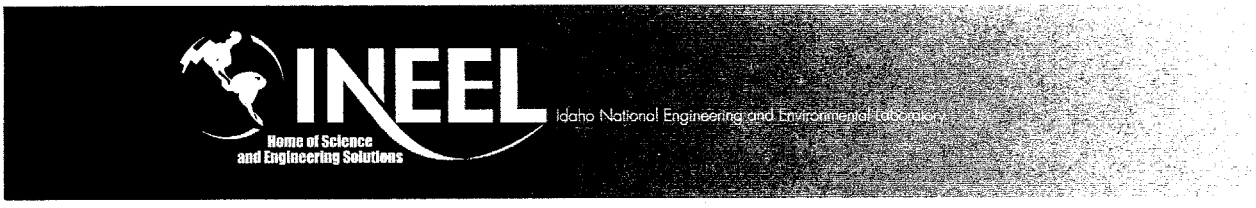
U.S. Department of Energy
Idaho Operations Office

Site PBF-33 Track 1 Decision Documentation Package, OU 10-08



DECISION DOCUMENTATION PACKAGE
COVER SHEET

Prepared in accordance with

TRACK 1 SITES:
GUIDANCE FOR ASSESSING
LOW PROBABILITY HAZARD SITES
AT THE INEEL

Site Description: Abandoned Debris Trench

Site ID: PBF-33 **Operable Unit: 10-08**

Waste Area Group: 10

I. SUMMARY – Physical description of the site:

Site PBF-33 is a debris-filled trench about 200 yards north of the Mixed Waste Storage Facility (MWSF) at the Power burst Facility (PBF) area. The MWSF was originally the Special Power Excursion Reactor Test No. IV (SPERT-IV) facility. The trench dimensions are approximately 160 x 10 x 5 ft.

In accordance with Management Control Procedure-3448, Reporting or Disturbance of Suspected Inactive Waste Sites, a new site identification form was completed for this site. As part of the process, a field team wrote a site description, and collected photographs and global positioning system (GPS) coordinates for the site . The GPS coordinate system is NAD 27, Idaho East Zone, State Plane Coordinates. The new site identification process also included a search and review of existing historical documentation.

The debris consists mainly of construction materials including broken concrete slabs and blocks, metal piping, empty 55-galllon drums, empty gasoline cans, metal wire, tires, wood, and other miscellaneous scrap. The age of the debris is unknown, but the materials are corroded and probably at least several decades old, which approximates the years the SPERT-IV facility operated between 1961 and 1970.

The trench debris also includes weathered lengths of asbestos reinforced Portland concrete (transite) piping. The pipe material was analyzed by polarized light microscopy with dispersion staining (PLM/DS) per SOP-IHL-2.01, which is similar to NIOSH 9002, and EPA method 600/M4-82-020, to verify the presence of asbestos. The material was also determined by an EPA certified asbestos inspector at the INL to be friable. This determination was made in accordance with 40 CFR 61.141 by application of hand finger pressure to pulverize the material. Although transite pipe is not generally considered to be friable, exposure to the elements has sufficiently weathered the material in the trench such that it can be pulverized by application of normal hand pressure.

A radiological survey was performed on the asbestos and approximately 20% of other items. All the direct beta/gamma scans were <100 counts per minute (cpm) above background and all alpha scans were equal to background.

The presence of the 55-gallon drums and gasoline cans indicate that releases of chemicals or petroleum products could have occurred. However, no staining or odors are apparent. The visible drums appear to be open and empty.

DECISION RECOMMENDATION

II. SUMMARY - Qualitative Assessment of Risk:

The source of the debris is unknown, but it could have been abandoned by the SPERT-IV facility during its construction or operation. Friable asbestos is present, but it is unknown what other potential contaminants may be present since no labels or other identifiers are visible on the empty containers and it is unknown if waste was in the drums at the time of container disposal.

Asbestos is a generic denomination for a group of natural fibrous silicate minerals. Asbestos separates into strong, very fine fibers that can be 1,200 times thinner than a human hair, can become airborne, and can be breathed into the lungs. The fibers can remain in the lungs for many years and cause asbestos-related diseases. Likely exposure pathways include inhalation of friable asbestos. Potential pathways include dermal absorption and ingestion of contaminants if soil contamination exists. Because the site is relatively remote from people and the asbestos is likely to be eroding very slowly, the overall qualitative risk is considered low.

Other potential exposure pathways are possible, but unknown with the current understanding of the waste. Site visits did not show the presence of stained soil, odors, disturbed vegetation, or other indicators of potential contamination.

The reliability of information provided in this report is high. Interviews were conducted with Environmental Management Environment Safety and Health (EM ES&H) personnel, and the Industrial Hygienist and Cultural Resources personnel who were present for the site investigations.

III. SUMMARY - Consequences of Error:

<u>False negative error:</u>

If the true condition is that the site's risk is unacceptable, but the data lead the decision makers to decide that the site's risk is acceptable, then the data have lead to an erroneous decision of no remedial action, which leads to increased risk to human health and environment.

<u>False positive error:</u>

If the true condition is that the site's risk is acceptable, but the data lead the decision makers to decide that the site's risk is unacceptable, then the data have lead to an erroneous decision that will be costly in terms of unnecessary cleanup.

IV. SUMMARY - Other Decision Drivers:

The asbestos at this site clearly represents a risk to human health that would be eliminated by removing it to an appropriate onsite landfill. The risk from the other debris is less clear, but the possibility that contamination levels at this site are above risk-based limits is remote. Although some of the cans or drums could have once contained hazardous compounds that may have been released to the trench, the drum's presence alone does not confirm that a release occurred. In addition, the concentration of many chemical compounds released to the environment between 1961 and 1970, if any, would have diminished over time by exposure to sun, wind, and rain, further reducing the likelihood that contaminants would be present at levels above risk-based concentrations. Site visits confirmed the absence of stained soil, odors, disturbed vegetation, or other indicators of potential soil contamination. In the absence of indicators of potential contamination, further action than removing the asbestos from this low risk site is not warranted and the funds expended could exceed the environmental benefit.

Recommended Action:

It is recommended that the INL remove the asbestos from this site and take it to an appropriate onsite landfill. This action could be accomplished without proceeding to a Track 2 investigation.

Signatures:	# Pages: 17	Date: August 26, 2004
Prepared By: Thomas Haney		DOE WAG Manager: RMShaw
Approved By:		Independent Review:

Determination

The U.S Department of Energy, U.S Environmental Protection Agency Region 10, and Idaho Department of Environmental Quality have completed the review of the referenced information for site PBF-33 in Operable Unit 10-08 as it pertains to the INEEL Federal Facility Agreement and Consent Order of 1991. Based on this review, the Parties have determined that the INEEL will remove the asbestos from the site and take it to the appropriate onsite landfill. A Track 2 is not required.

Brief summary of the basis for the recommendation:

See Decision Statements on Pgs 5|6,7

References:

DOE Project Manager NA _____ Date

EPA Project Manager NA _____ Date

IDEQ Project Manager NA _____ Date

DECISION STATEMENT
(DOE RPM)

Date Received:

Disposition:

The DOE RPM Concurs that removal of the friable asbestos followed by proper disposal is the correct path forward, and that No other investigation is necessary unless new information/observation suggests there are addition release issues.

Date: 3-22-06	# Pages:
Name: Nolan R. Jensen	Signature: Nolan R. Jensen

DECISION STATEMENT
(EPA RPM) PBF-33

Date Received:

Disposition:

EPA Concurs with removal of the Friable asbestos and piping that could deteriorate over time. During removal of the asbestos personnel should re-inspect the trench to ensure no other Hazardous Constituents are present.

Date: 9-23-09	# Pages:
Name: DENNIS FAULK	Signature:

DECISION STATEMENT
(IDEQ RPM)

Date Received: September 23, 2004

Disposition:

Site PBF-33 Track 1 Decision Documentation Package, OU 10-08

Disposition:

The site is a debris filled trench that is about 160 X 10 X 5 feet and is located about 200 yards north of the Mixed Waste Storage Facility in the PBF area. The debris is "mainly construction materials including broken concrete slabs and blocks, metal piping, empty 55-gallon drums, empty gasoline cans, metal wire, tires, wood, and other miscellaneous scrap." It is believed the debris dates to the operations of SPERT-IV between 1961 and 1970. The debris also includes weathered asbestos reinforced Portland concrete pipe that was analyzed to verify presence of asbestos and tested to determine whether the pipe is friable. The pipe was determined to be friable. There is no evidence of other contamination at the this site and the direct beta/gamma scans were <100 counts per minute and all alpha scans were equal to background.

The State concurs the asbestos should be removed from the site and disposed at an appropriate onsite landfill. This action can proceed without initiating a Track 2 investigation.

Date: September 28 2004	# Pages:
Name: Doug E. Koch	Signature:

PROCESS/WASTE WORKSHEET PROCESS: Abandoned Debris Trench SITE ID: PBF-33 WASTE: Industrial		
Col 1 Processes Associated With This Site	Col 2 Waste Description & Handling Procedures	Col 3 Description & Location of any Artifacts/Structures/Disposal Areas Associated with this Waste or Process
A trench was used as a dumpsite for industrial waste possibly related to the SPERT-IV facility.	Waste was likely discarded into the trench during the years of SPERT-IV operation between 1961 and 1970. Field surveys in 2001 revealed physical evidence of asbestos reinforced concrete piping.	**Artifacts:** Asbestos **Location:** In a trench approximately 200 yards north of the MWSF. **Description:** The asbestos-reinforced concrete piping was determined to be friable by an INEEL IH. **Artifacts:** Industrial debris **Location:** In a trench approximately 200 yards north of the MWSF. **Description**: The debris includes broken concrete slabs and blocks, metal piping, empty 55-galllon drums, empty gasoline cans, metal wire, tires, wood, and other miscellaneous scrap.

CONTAMINANT WORKSHEET

SITE ID: PBF-33

PROCESS: (Col 1) Debris in Canal West/Northwest of Guard Gate 3 WASTE: (Col 2) Industrial

Col 4 What Known/Potential Hazardous Substance/Constituents are Associated with this Waste or Process?	Col 5 Potential Sources Associated with this Hazardous Material	Col 6 Known/Estimated Concentration of Hazardous Substances/ Constituents	Col 7 Risk-based Concentration	Col 8 Qualitative Risk Assessment (hi/med/low)	Col 9 Overall Reliability (high/med/low)
Asbestos (asbestos-containing concrete piping)	Air, soil	35% Chrysotile 65% concrete matrix	Not Applicable	Low	High

Question 1. What are the waste generation processes, locations, and dates of operation associated with this site?

Block 1 Answer:

Site PBF-33 is a debris-filled trench about 200 yards north of the MWSF at the PBF area. The trench dimensions are approximately 160 x 10 x 5 ft. The MWSF was originally the SPERT-IV facility, which operated between 1961 and 1970. The debris may be related to SPERT-IV. The debris consists mainly of construction materials including broken concrete slabs and blocks, metal piping, empty 55-galllon drums, empty gasoline cans, metal wire, tires, wood, and other miscellaneous scrap. The age of the debris is unknown, but the materials are corroded and probably at least several decades old, which matches the operating dates of SPERT-IV.

Block 2 How reliable are the information sources? _High _X_Med _Low (check one)
Explain the reasoning behind this evaluation.

The assertion that the debris is related to SPERT-IV is speculation.

Block 3 Has this INFORMATION been confirmed? _Yes X_No (check one)
If so, describe the confirmation.

The source of the debris is not confirmed. The composition of the debris, including friable asbestos, is confirmed.

Block 4 Sources of Information [check appropriate box(es) & source number from reference list]

No available information	[ ]	Analytical data	[X] 5, 6
Anecdotal	[X] 2, 3, 7	Documentation about data	[ ]
Historical process data	[ ]	Disposal data	[ ]
Current process data	[ ]	Q.A. data	[ ]
Photographs	[X] 11	Safety analysis report	[ ]
Engineering/site drawings	[ ]	D&D report	[ ]
Unusual Occurrence Report	[ ]	Initial assessment	[ ]
Summary documents	[x] 3	Well data	[ ]
Facility SOPs	[ ]	Construction data	[ ]
OTHER	[ ]		

Question 2. What are the disposal processes, locations, and dates of operation associated with this site? How was the waste disposed?

Block 1 Answer:

Site PBF-33 is a debris-filled trench about 200 yards north of the MWSF at the PBF area. The MWSF was originally the SPERT-IV facility. The trench dimensions are approximately 160 x 10 x 5 ft.

It is assumed that the debris was associated with the SPERT-IV facility, which operated between 1961 and 1970. Based on the type of debris, it appears to have been dumped into the trench during construction work.

Block are the information sources? _ High _X Med _Low (check one)
Explain the reasoning behind this evaluation.

Most of the debris appears to be related to construction.

Block 3 Has this INFORMATION been confirmed? _Yes X_No (check one)
If so, describe the confirmation.

Although the actual processes and the dates of operation are not confirmed, the location of the debris is confirmed. An Industrial Hygienist confirmed the presence of friable asbestos. Photographs confirm the types of debris in the canal.

Block 4 Sources of Information [check appropriate box(es) & source number from reference list]

No available information	[ ]	Analytical data	[X] 5, 6
Anecdotal	[X] 2, 3, 7	Documentation about data	[ ]
Historical process data	[ ]	Disposal data	[ ]
Current process data	[ ]	Q.A. data	[ ]
Photographs	[X] 11	Safety analysis report	[ ]
Engineering/site drawings	[ ]	D&D report	[ ]
Unusual Occurrence Report	[ ]	Initial assessment	[ ]
Summary documents	[x] 3	Well data	[ ]
Facility SOPs	[ ]	Construction data	[ ]
OTHER	[ ]		

Question 3. Is there evidence that a source exists at this site? If so, list the sources and describe the evidence.

Block 1 Answer:

Field investigations in 2001 revealed physical evidence of friable asbestos in the trench. The other debris in the trench includes drums and cans that indicate that releases of chemicals and/or petroleum products could have occurred. A radiological survey was performed on the asbestos and approximately 20% of the other items, and all direct scans were <100 cpm above background for the beta-gamma scan and there was no detectable alpha above background. Site visits confirmed the absence of stained soil, odors, disturbed vegetation, or other indicators of potential soil contamination.

Block 2 How reliable are the information sources? _High X Med _Low (check one)
Explain the reasoning behind this evaluation.

The Industrial Hygienist confirmed that some of the debris was friable asbestos. Photographs show debris piles. The radiological surveys, while useful, generally cannot detect levels that may be of concern for CERCLA risk assessment. The type and location of the former contents of the 55-gallon drum are unknown.

Block 3 Has this information been confirmed? X Yes _No (check one)
If so, describe the confirmation.

Memos from personnel involved in the process are attached. A memo from the Industrial Hygienist confirmed the presence of asbestos-containing material in the canal.

Block 4 Sources of Information [check appropriate box(es) & source number from reference list]

No available information	[ ]	Analytical data	[X] 5, 6
Anecdotal	[X] 2, 3, 7	Documentation about data	[ ]
Historical process data	[ ]	Disposal data	[ ]
Current process data	[ ]	Q.A. data	[ ]
Photographs	[X] 11	Safety analysis report	[ ]
Engineering/site drawings	[ ]	D&D report	[ ]
Unusual Occurrence Report	[ ]	Initial assessment	[ ]
Summary documents	[x] 3	Well data	[ ]
Facility SOPs	[ ]	Construction data	[ ]
OTHER	[ ]		

Question 4. Is there empirical, circumstantial, or other evidence of migration? If so, what is it?

Block 1 Answer:

There is no visual evidence of migration, such as stained soil, at this site; however, the IH confirmed that the asbestos containing material is friable and that some weathering has occurred.

Block 2 How reliable are the information sources? _High X Med _Low (check one)
Explain the reasoning behind this evaluation.

The IH confirmed that the asbestos was friable and the material has been weathered.

Block 3 Has this information been confirmed? X Yes _No (check one)
If so, describe the confirmation.

Site inspections revealed no visual evidence of migration.

Block 4 Sources of Information [check appropriate box(es) & source number from reference list]

No available information	[ ]	Analytical data	[x] 5, 6
Anecdotal	[X] 2, 3, 7	Documentation about data	[ ]
Historical process data	[ ]	Disposal data	[ ]
Current process data	[ ]	Q.A. data	[ ]
Photographs	[X] 11	Safety analysis report	[ ]
Engineering/site drawings	[ ]	D&D report	[ ]
Unusual Occurrence Report	[ ]	Initial assessment	[ ]
Summary documents	[x] 3	Well data	[ ]
Facility SOPs	[ ]	Construction data	[ ]
OTHER	[ ]		

Question 5. Does site operating or disposal historical information allow estimation of the pattern of potential contamination? If the pattern is expected to be a scattering of hot spots, what is the expected minimum size of a significant hot spot?

Block 1 Answer:

There is no expected pattern of contamination from the asbestos because it appears to have been randomly dumped. Some asbestos is clearly visible, but more could be present under the other debris. The pattern for other hazardous constituents (organics, metals, radionuclides, etc.) isn't known.

Block 2 How reliable are the information sources? _High X Med _Low (check one) Explain the reasoning behind this evaluation.

This estimate was derived from the visual appearance of the trench observed during the site investigations. Photographs indicate that the soil is not stained or discolored and vegetation near the debris is well established.

Block 3 Has this information been confirmed? Yes X No (check one)
If so, describe the confirmation.

Site investigation documentation and photographs of the site provide information for this estimate.

Block 4 Sources of Information [check appropriate box(es) & source number from reference list]

No available information	[ ]	Analytical data	[X] 5, 6
Anecdotal	[X] 2, 3, 7	Documentation about data	[ ]
Historical process data	[ ]	Disposal data	[ ]
Current process data	[ ]	Q.A. data	[ ]
Photographs	[X] 11	Safety analysis report	[ ]
Engineering/site drawings	[ ]	D&D report	[ ]
Unusual Occurrence Report	[ ]	Initial assessment	[ ]
Summary documents	[x] 3	Well data	[ ]
Facility SOPs	[ ]	Construction data	[ ]
OTHER	[ ]		

Question 6. Estimate the length, width, and depth of the contaminated region. What is the known or estimated volume of the source? If this is an estimated volume, explain carefully how the estimate was derived.

Block 1 Answer:

The debris is located in a trench with dimensions approximately 160 x 10 x 5 ft. The depth of the debris varies from a few inches to a few feet. The volume of the trench is approximately 300 yd^3, but the volume of debris is much less.

Although debris is present, there does not appear to be a contaminated region to estimate. The volume of asbestos containing material is probably less than 3 yd^3. The estimated volume of contamination for organics, metals, radionuclides or other hazardous constituents (if any) is unknown.

Block 2 How reliable are the information sources? _High _X_Med _Low (check one)
Explain the reasoning behind this evaluation.

The estimated volume of asbestos is based on observation.

Block 3 Has this INFORMATION been confirmed? _X_Yes No (check one)
If so, describe the confirmation.

The presence of asbestos has been confirmed.

Block 4 Sources of Information [check appropriate box(es) & source number from reference list]

No available information	[ ]	Analytical data	[X] 5, 6
Anecdotal	[X] 2, 3, 7,	Documentation about data	[ ]
Historical process data	[ ]	Disposal data	[ ]
Current process data	[ ]	Q.A. data	[ ]
Photographs	[X] 11	Safety analysis report	[ ]
Engineering/site drawings	[ ]	D&D report	[ ]
Unusual Occurrence Report	[ ]	Initial assessment	[ ]
Summary documents	[x] 3	Well data	[ ]
Facility SOPs	[ ]	Construction data	[ ]
OTHER	[ ]		

Question 7. What is the known or estimated quantity of hazardous substance/constituent at this source? If the quantity is an estimate, explain carefully how the estimate was derived.

Block 1 Answer:

The estimated quantity of hazardous substances/constituents at this site is < 3 yd^3 based on visual estimate of the amount of asbestos containing material present.

The volume of contamination for organics, metals, radionuclides or other hazardous constituents is expected to be small or nonexistent based on past observation.

Block 2 How reliable are the information sources? _High X Med _Low (check one)
Explain the reasoning behind this evaluation.

Additional site visits and looks beneath the debris would be required to confirm the presence of additional asbestos and the presence of soil staining or other indicators of potential contamination.

Block 3 Has this INFORMATION been confirmed? X Yes No (check one)
If so, describe the confirmation.

The presence of friable asbestos has been confirmed.

Block 4 Sources of Information [check appropriate box(es) & source number from reference list]

No available information	[ ]	Analytical data	[x] 5, 6
Anecdotal	[X] 2, 3, 7	Documentation about data	[ ]
Historical process data	[ ]	Disposal data	[ ]
Current process data	[ ]	Q.A. data	[ ]
Photographs	[X] 11	Safety analysis report	[ ]
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Unusual Occurrence Report	[ ]	Initial assessment	[ ]
Summary documents	[x] 3	Well data	[ ]
Facility SOPs	[ ]	Construction data	[ ]
OTHER	[ ]		

Question 8. Is there evidence that this hazardous substance/constituent is present at the source as it exists today? If so, describe the evidence.

Block 1 Answer:

Friable asbestos is present at this site. Other contaminants could be present, but past observations have not indicated the presence of stained soil.

Block 2 How reliable are the information sources? _High X Med _Low (check one)
Explain the reasoning behind this evaluation.

This evaluation is based on site visitations and photographs of the site.

Block 3 Has this INFORMATION been confirmed? _Yes X No (check one)
If so, describe the confirmation.

The presence of asbestos has been confirmed.

Block 4 Sources of Information [check appropriate box(es) & source number from reference list]

No available information	[ ]	Analytical data	[X] 5, 6
Anecdotal	[X] 2, 3, 7	Documentation about data	[ ]
Historical process data	[ ]	Disposal data	[ ]
Current process data	[ ]	Q.A. data	[ ]
Photographs	[X] 11	Safety analysis report	[ ]
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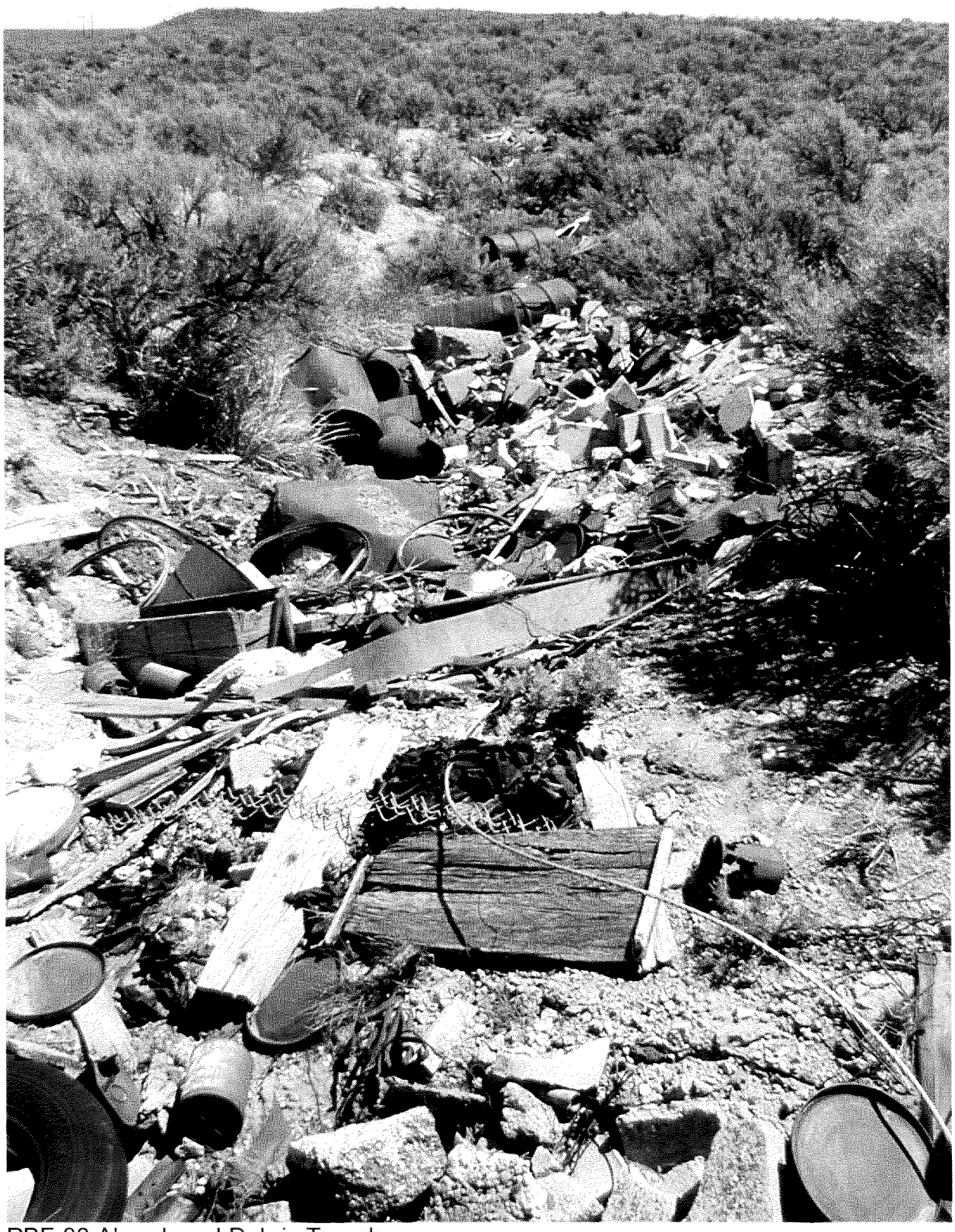
Unusual Occurrence Report	[ ]	Initial assessment	[ ]
Summary documents	[x] 3	Well data	[ ]
Facility SOPs	[ ]	Construction data	[ ]
OTHER	[ ]		

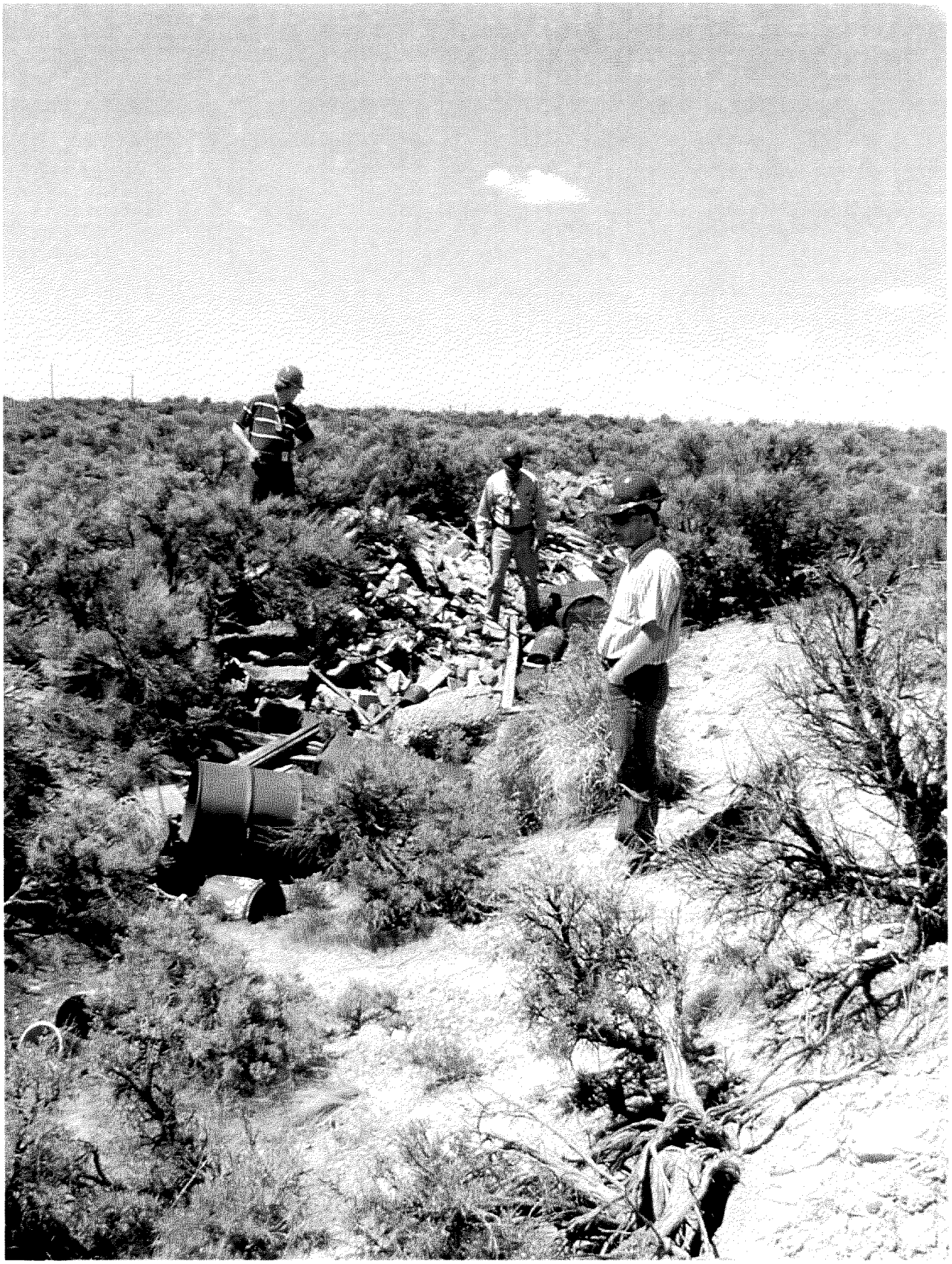
REFERENCES

1. DOE, 1992, Track 1 Sites: Guidance for Assessing Low Probability Sites at the INEL, DOE/ID-10390 (92), Revision 1, U.S. Department of Energy, Idaho Falls, Idaho, July.
2. Memorandum from Doug Preussner to Tim Carlson, November 13, 2000, transmitting Fact Sheet.
3. Fact Sheet Memorandum from Nicole K. Hernandez to Distribution, November 8, 2000.
4. Memorandum form Robert G. Akins to Frank L. Webber, November 8, 2000, transmitting results of the IH laboratory analysis of asbestos.
5. INEEL Industrial Hygiene laboratory analytical report covering the asbestos, November 8, 2000.
6. Memorandum from Dean L. Roberts to Robert G. Akins, November 14, 2000, discussing the results of the radiological field screening.
7. Memorandum from Robert G. Akins to Frank L. Webber, November 13, 2000, discussing the friable asbestos.
8. Map showing location of abandoned debris trench in relation to MWSF, November 14, 2000, titled, "Abandoned Debris Trench Approx. 200 yds. (600 ft) North of the MWSF.
9. Memorandum from Daniel D. Mahnami to Robert G. Akins, November 14, 2000, transmitting northing and easting coordinates of the trench
10. Northings and Eastings for the trench.
11. Photographs of Site #PBF-33.

Attachments for Site PBF-33



PBF-33 Abandoned Debris Trench



PBF-33: Inspection

PBF-33: asbestos reinforced concrete piping.